KIRKLAND & ELLIS
A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

200 East Randolph Drive
Chicago, Illinois 60601

312 861-2000

Facsimile:
312 861-2200

Diane K. Moore
To Call Writer Direct
312 861-2470

June 8, 1994

Steven Siegel, Esq.
U.S. Environmental Protection Agency, CS-3T
77 West Jackson Boulevard
Chicago, IL 60604

Re: NL Industries Superfund Site - Granite City, Illinois

Dear Mr. Siegel:

As you requested, enclosed are Exhibits 7 and 8 to Charles Sparks' Deposition. Exhibit 7, a November 29, 1971 memorandum, was previously produced to you in NL Industries' § 104(e) Response dated February 14, 1994. Exhibit 8 is a copy of an aerial photograph on which Mr. Sparks made various notations during his deposition.

With a few minor exceptions, fact discovery in the insurance coverage case is complete, and expert discovery should begin sometime this summer. The court has not set a trial date yet, making it unlikely that this case will go to trial before the end of the year.

Please feel free to call me if you have any questions.

Very truly yours,

Diane K. Moore

Diane K. Moore, Esq.

DAM:bas
Enclosure

cc: Reed S. Oslan, Esq.

EXHIBIT
Sparks 8
3-4-94

DISPOSAL OF THALLIUM LEAD DROSSES 11/29/71

Mr. F. A. Eichorn, Manager — St. Louis Region - Granite City

J. M. Roper — Metal Division - New York Office

Confirming our conversation with respect to the toxicity of the thallium drosses generated at the Hayt Plant, it was decided to proceed as follows:

1. You will direct someone in your organization to find out from AS&R, the supplier of the thallium ingots; if they will purchase the dross, or if they can direct you to someone who does handle thallium drosses.

2. If the above proves fruitless, the cost of placing the 22 gal. drums in concrete before disposal should be investigated.

Attached is a fact sheet on Thallium and I think you will agree that more care must be taken with these residues than in the past.

I would appreciate hearing of your progress in this matter.

JWR/cc
Attachment

cc: R. W. Merritt
S. Williams

TX 500701

THALLIUM - Skin

Tl

0.1 mg/m^3

According to Patty(1), thallium is one of the more toxic elements from the standpoint of both acute and chonic poisoning, and regardless of the rate of intake. LD50 values for different compounds, by various routes of administration and for several species of animals ranged from 3 to 92 mg/kg. The most characteristic symptom of intoxication is alopecia (loss of hair). Other symptoms in acute poisoning relate mainly to the gastrointestinal tract or nervous system. In chronic poisoning such manifestations as inflammation, paralysis of extremities, endocrine disorders and psychoses may develop.

Heyroth(2) in a 1947 review of the literature, noted reports of 778 cases, 46 of them fatal, prior to 1933, and several more in the following 14 years. Most of these cases were caused by the ingestion of thallium salts, many of the victims being children. Reed et al.(3) in a follow-up of 72 of over 130 children poisoned by thallium in Texas between 1954 and 1958, stated that since 1932 hundreds of cases of thallotoxicosis due to the ingestion of pesticides had been reported. In 26 of 48 children poisoned by thallium who were examined later, neurological abnormalities were found, with mental retardation and psychoses the most common findings.

Occupational poisoning was reported in connection with the preparation and use of thallium containing pesticides(4,5). Richeson(6) described 12 cases of varying severity among 15 men using organic thallium salts. Absorption through the skin was postulated, since tests revealed no thallium in the air. The chief complaints were abdominal pain, fatigue, irritability, weight loss, and pains in the legs. Loss of hair was noted by only four men. In one of the worst cases a urinary thallium concentration of about 1 mg/liter was found.

Truhaut(7) made extensive studies of thallium toxicity, and Downs and co-workers(8) [illegible] that thallium and thallic compounds were both extremely toxic. Despite these investigations and reports, no satisfactory data exist from which to derive a threshold limit for thallium. The value of 0.1 mg/m^3 is based largely on analogy with other highly toxic heavy metals. Truhaut(9) considered this a satisfactory value to protect against systemic toxicity. The Soviet limit (1967) was 0.01 mg/m^3.

References:

1. Patty, F.A.: Industrial Hygiene and Toxicology, Vol. II, 2nd Ed., pp. 1138-1143, Interscience New York (1963).
2. Heyroth, F.E.: Pub. Health Repts. Suppl. 197 (1947).
3. Reed, D., Crawley, J., Faro, S.N., Pieper, S.J., Kurland, L.T.: J. Am. Med. Assn. 183, 51 (1963).
4. Foreign Letters, J. Am. Med. Assn. 159, 510 (1955).
5. Pub. Health Repts. 77, 518 (1962).
6. Richeson, E.M.: Ind. Med. & Surg. 27, 607 (1958).
7. Truhaut, R.: Recherches sur la Toxicologie du Thallium; Inst. nat. soc. pour preve[illegible] accidents du travail, Paris (1958).
8. Downs, W.L., Scott, J.K., Steadman, L.T., Maynard, E.A.: Am. Ind. Hyg. Assn. J. 21, 39 (1960).
9. Truhaut, R.: Personal communication to TLV Committee member (1959).